

Office of Gas and Electricity Markets
10, South Colonnade
Canary Wharf London
E14 4PU

Email: WMReform@ofgem.gov.uk

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Ørsted response to Locational Pricing Assessment Call for Input

The Ørsted vision is a world that runs entirely on green energy. Ørsted develops, constructs and operates offshore and onshore wind farms, solar farms and energy storage facilities, bioenergy plants and provides energy products to its customers. Headquartered in Denmark, Ørsted employs 6,500 people including over 1,000 in the UK. Globally, Ørsted is the market leader in offshore wind and it is constructing the world's biggest offshore wind farms off the East Coast of the UK. Its UK offshore wind farms generate enough clean electricity for over four million UK homes.

Our business depends heavily on the design of power markets, and any changes to those designs can significantly affect our operations. In particular, we develop offshore wind farms that are necessarily rigid in where they can connect to the grid, and therefore aspects of market design that relate to location impact us heavily. We are therefore grateful to have the opportunity to comment on Ofgem's Call for Input into the analysis of transitioning to a more granular locationally priced market.

The Government has increased the country's offshore wind ambition to 50GW by 2030. Achieving this will be a challenge, as it:

- Requires unprecedented levels of investment, including anticipatory investment, in new assets, supply chains and infrastructure;
- Will require new approaches and innovation across sector boundaries to find new solutions;
- Depends on acting at pace to ensure that timelines are met; and
- Comes at a time when both energy affordability and supply security are of huge importance and highly sensitive.

It is important to assess the case for change first – it might be possible to achieve the above ambition, as well as the other ambitions from the recent Energy Security Strategy, through a new market design, but this is by no means the only route and may not be the best. A significant level of industry change is already needed that will require a large share of the finite resource available to central decision makers and potential delivery bodies (e.g. delivery of FSO programme, changes to industry codes and governance). In this context, the net costs and benefits of transitioning to a locationally priced market have to include the wider costs of diverting resource away from other programmes that therefore incur greater non-delivery risk.

Of critical importance will be making sure that any assessment bears in mind the pace and scale of investment needed over the coming years. In all market design conversations, the risk of an investment hiatus resulting from market uncertainty needs to be considered. In this case, the impact of

investment hiatus risk has to be elevated in response to the enormous investment requirements in transmission, new build generation, and innovative technologies such as storage and hydrogen.

Finally, it is worth commenting on the timing of this Call for Input. Ofgem's programme of work mentions a set of steps where the first step is to establish the case for change. This does not appear to have been examined or communicated to industry, although this Call for Input informs subsequent steps. Furthermore, the Government's first consultation on the REMA programme has not yet been published and is likely to include clarity on whether locational pricing is proposed to be in scope, and if so in what form. Given that both the case for change and REMA publications have significant potential to inform the scope of Ofgem's proposed analysis, it seems premature to begin work on modelling locational pricing, and risks making efforts from Ofgem and industry redundant. It would be very helpful to clarify why Ofgem believes it is necessary to issue this Call for Input at this early stage before this critical information is published.

In the remainder of this response letter, we have provided some inputs in relation to the three questions you have specifically asked.

1. The key opportunities associated with introducing more granular locational pricing in GB

It is very difficult to answer this question without clearer guidance of what is the defined case for change. Before being able to answer this question at all, it is important that Ofgem defines a suitable counterfactual. For example, should the opportunities and threats be measured against the current market arrangements, or against alternative measures that might introduce locational signals, such as amendments to charging regimes?

If Ofgem is able to frame the case for change and define the counterfactual (to align with scope of the REMA programme), at that point it would be worth reissuing this question to industry in order to obtain better informed answers.

2. The key implementation challenges, risks and mitigations

As already mentioned, significant challenges relate to mitigating investment hiatus risk, and non-delivery of other important industry change programmes. These need to be captured in the analysis for the widest possible view. It is worth adding the investment risk inherent to locationally granular markets that arise from the inability to capture price risk at a particular location, as it is highly dependent on other local changes to supply and demand.

There is a risk that any benefits of introducing locational pricing would immediately be limited. That is because new build generation has limited ability to respond to locational price signals when choosing where to site. For example, onshore windfarms in Scotland were offered a less burdensome route to siting through the Connect & Manage scheme, and generators are offered curtailment payments under current arrangements. If a locationally priced market is overlaid with further interventions that effectively act to counter the locational signals, it begs the question of whether the full level of signal exposure would ever be felt, and therefore if the transition is worthwhile.

There are suites of commercial agreements that use national price indices as the basis for pricing. For example, renewable CfDs use a day ahead index. It is not clear how to treat these agreements (e.g. to grandfather, which would require a national price index proxy to be calculated)

and how to transition such arrangements into a system that will have more inherent price volatility. In particular, defining an index where market liquidity is divided between regions is a challenge.

3. The proposed approach to modelling zonal and nodal market designs

Again, without an established case for change it is difficult to comment on what would be the best modelling approach to ensure that the analysis is suitable. Nevertheless some general comments follow.

As with all market design analyses, managing trade offs is crucial. This includes value of bringing forward new investment promptly vs in optimal locations. Similarly the trade off between siting generation based on proximity to demand vs proximity to resources is key, particularly as proximity to resources is fundamental to renewable and nuclear generation.

There is a question of how network investment signals should be treated. It does not naturally follow that a more locationally granular market pricing leads to a change in network investment signals. It is the experience in nodal markets that outside intervention is still required to bring forward network investment, therefore the analysis needs to account for how network investment decisions should be made.

Yours sincerely
Ørsted

David Wellard
Regulatory Affairs Manager

davwe@orsted.com
Tel +44 7825 857 073